

# MATERIAL SAFETY DATA SHEET



## DURSBAN\* TC TERMITICIDE CONCENTRATE

Emergency Phone: 800-992-5994  
Dow AgroSciences LLC • Indianapolis, IN  
46268

Effective Date: 01/01/98  
Product Code: 26056  
MSDS: 001449

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** DURSBAN\* TC TERMITICIDE  
CONCENTRATE

#### COMPANY IDENTIFICATION:

Dow AgroSciences  
P.O. Box 681428  
9330 Zionsville Road  
Indianapolis, IN 46268-1189  
www.dowagro.com

### 2. COMPOSITION/INFORMATION ON INGREDIENTS:

O,O-Diethyl O-(3,5,6-trichloro-2-pyridinyl)		
phosphorothioate,		
(chlorpyrifos)	CAS# 002921-88-2	44%
Proprietary Ingredients, total, including:		56%
Xylene range aromatic solvent	CAS# 064742-95-6	

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR) 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

### 3. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Hazardous Chemical. Yellowish-brown liquid. Gasoline odor. Rapid decomposition. Avoid heating above 114°F. Toxic irritating gases may be formed under fire conditions. Cholinesterase inhibitor. May cause eye irritation with slight corneal injury. Prolonged exposure may cause skin irritation. Toxic to fish, avian, bees, and aquatic organisms.  
**EMERGENCY PHONE NUMBER:** (U.S.) 800-992-5994

**POTENTIAL HEALTH EFFECTS:** This section includes possible adverse effects which could occur if this material is not handled in the recommended manner.

**EYE:** May cause moderate eye irritation. May cause slight corneal injury. Effects may be slow to heal. Vapors may irritate eyes.

**SKIN:** Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation. A test in guinea pigs indicated that this product may have weak skin sensitization potential. However, experience in the manufacture and use of this product has not provided evidence for skin sensitizing properties. Furthermore, the product did not sensitize human subjects when tested at an end-use dilution. A single prolonged exposure may result in the material being absorbed in harmful amounts. The LD50 for skin absorption in rabbits is 1265 mg/kg, males and 930 mg/kg, females.

**INGESTION:** Single dose oral toxicity is moderate. The oral LD50 for male rats is 226 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death. If aspirated (liquid enters the lung), may cause damage or even death due to chemical pneumonia.

**INHALATION:** The LC50 for female rats is between 2.6-3.6 mg/L for 4 hours. Excessive exposure may produce organophosphate type cholinesterase inhibition. Excessive exposure to solvent may cause respiratory tract irritation and central nervous system depression. Signs and symptoms of central nervous system depression, in order of increasing exposure, are headache, dizziness, drowsiness, and incoordination.

#### SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:

Excessive exposure may produce organophosphate-type cholinesterase inhibition. Signs and symptoms of excessive exposure to chlorpyrifos may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, and convulsions. Chlorpyrifos produced mild adrenal effects when fed to rats, but only at doses that greatly exceeded any exposures that would be received during use of this product. Solvent has been reported to cause liver, kidney, and blood effects at high exposure levels. Xylene, a minor component of this mixture, is reported to have caused hearing loss in laboratory animals upon inhalation of high concentrations; such effects have not been reported in humans.

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**CANCER INFORMATION:** Chlorpyrifos did not cause cancer in long-term animal studies.

**TERATOLOGY (BIRTH DEFECTS):** Chlorpyrifos did not cause birth defects in laboratory animals. Solvent was toxic to the fetus in laboratory animal tests, but only at doses that were toxic to the mothers. Very high concentrations of solvent (producing severe toxicity to adult animals) induced an increase in cleft palate in mice, which is a common developmental abnormality in mice and is associated with stress to the maternal animals. No malformations were induced at exposures less than those causing severe toxicity to the adult animals.

**REPRODUCTIVE EFFECTS:** Chlorpyrifos did not interfere with fertility in reproduction studies in laboratory animals. Some evidence of toxicity to the offspring occurred, but only at a dose high enough to produce significant toxicity to the parent animals. In a 3-generation reproduction study on the solvent, the only effects observed were at exposures that produced severe toxicity to the parent animals.

### 4. FIRST AID:

**EYES:** Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

**SKIN:** Immediately wash skin with plenty of soap and water. Consult medical personnel. Remove contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes and other contaminated leather articles such as belts and watchbands.

**INGESTION:** Call a physician or poison control center immediately. Do not induce vomiting. Contains an aromatic petroleum solvent. Do not give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air if symptoms of cholinesterase inhibition appear and get medical attention immediately.

**NOTE TO PHYSICIAN:** The decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferred antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning,

use antidote immediately after establishing an open airway and respiration. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** 114°F @ 760 mmHg

**METHOD USED:** TCC

**FLAMMABLE LIMITS**

LFL: 1%

UFL: 6% (xylene range aromatic solvent)

**EXTINGUISHING MEDIA:** Foam, carbon dioxide, and dry chemical.

**FIRE & EXPLOSION HAZARDS:** Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions. Rapid decomposition above 320-392°F (160-200°C). Violent rupture of containers due to over-pressurization may occur at temperatures generated during a fire.

**FIRE-FIGHTING EQUIPMENT:** Use positive-pressure, self-contained breathing apparatus and full protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES: (See Section 15 for Regulatory Information)

**ACTION TO TAKE FOR SPILLS/LEAKS:** Absorb spills with an absorbent material such as HAZORB, ZORBALL, or dirt. Thoroughly wash body areas which come into contact with this product. Contain spill to keep out of sewers. For large spills, consult manufacturer.

### 7. HANDLING AND STORAGE:

**SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** See label. Keep out of reach of children. Do not swallow. Do not get in eyes or on skin. Avoid breathing mist or vapors. Keep away from heat and open flame. Handle concentrate in ventilated area. Wash thoroughly after handling. Depending on degree of exposure of personnel, consider monitoring blood cholinesterase levels. If in doubt, seek advice from Dow AgroSciences. Keep away from food, feedstuffs and domestic water supplies. For health and safety information on end-use dilutions of up to 1% Dursban insecticides, see the Health and Safety Fact Sheet, Form Number 312-10-014, available from Dow AgroSciences.

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### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

These precautions are suggested for conditions with a high potential for exposure. If handling procedures are such that there is only a low potential for exposure, less protection may be needed. Emergency conditions may require additional precautions.

**EXPOSURE GUIDELINES:** Chlorpyrifos: ACGIH TLV and OSHA PEL are 0.2 mg/m<sup>3</sup>, Skin. ACGIH classification is A4. Xylene: ACGIH TLV and OSHA PEL are 100 ppm TWA, 150 STEL. ACGIH classification is A4. PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

**ENGINEERING CONTROLS:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use a NIOSH approved air-purifying respirator.

**SKIN PROTECTION:** Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse. **EYE PROTECTION:** Use chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator.

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**BOILING POINT:** 290°F, 143°C

**VAPOR PRESSURE:** < 10 mmHg @ 25°C

**VAPOR DENSITY:** Not determined

**SOLUBILITY IN WATER:** Emulsifiable

**SPECIFIC GRAVITY:** 1.0966 g/mL @ 20°C

**APPEARANCE:** Yellowish brown liquid

**ODOR:** Gasoline odor pH: 5.61 (10.0% dilution in water)

### 10. STABILITY AND REACTIVITY:

**STABILITY:** (CONDITIONS TO AVOID) Avoid heating above 114°F. Chlorpyrifos undergoes exothermic decomposition at approximately 130°C (266°F) which can lead to higher temperatures and violent decomposition if generated heat is not removed. Contains petroleum derivative solvent - will burn.

**INCOMPATIBILITY:** (SPECIFIC MATERIALS TO AVOID)  
None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Under fire conditions, hydrogen chloride, ethyl sulfide, diethyl sulfide and nitrogen oxides can be formed.

**HAZARDOUS POLYMERIZATION:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION:

For detailed toxicological data, write the address shown in Section 1 or call the emergency number.

**MUTAGENICITY:** Based on a majority of negative data and some equivocal or marginally positive results, chlorpyrifos is considered to have minimal mutagenic potential. Results of in-vitro (test tube) and animal mutagenicity tests on the aromatic solvent have been negative.

### 12. ECOLOGICAL INFORMATION:

For detailed toxicological data, write the address shown in Section 1 or call the emergency number.

Chlorpyrifos is toxic to fish, aquatic organisms, bees and avian.

### 13. DISPOSAL CONSIDERATIONS:

**DISPOSAL METHOD:** Do not contaminate food, feed, or water by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

### 14. TRANSPORT INFORMATION:

For DOT regulatory information, if required, consult transportation regulations, product shipping papers, or contact your Dow AgroSciences representative.

### 15. REGULATORY INFORMATION:

**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given.

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Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

### U.S. REGULATIONS

**SARA 313 INFORMATION:** To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements. SARA **HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard
- A fire hazard

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

**STATE RIGHT-TO-KNOW:** The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>LIST</u>
CHLORPYRIFOS	002921-88-2	NJ3 PA1 PA3

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).  
PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).  
PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

**OSHA HAZARD COMMUNICATION STANDARD:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

<u>Category</u>	<u>Rating</u>
Health	2
Flammability	2
Reactivity	1

**COMPREHENSIVE ENVIRONMENTAL RESPONSE  
COMPENSATION AND LIABILITY ACT (CERCLA, or  
SUPERFUND):** This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA which may require reporting of releases:  
Category:

<u>Chemical Name</u>	<u>CAS#</u>	<u>RQ</u>	<u>% in Product</u>
Chlorpyrifos	002921-88-2	1	44%

### 16. OTHER INFORMATION:

#### MSDS STATUS:

Revised to reflect company name change

**EPA Registration Number:** 62719-47

The Information Herein Is Given In Good Faith, But No Warranty, Express Or Implied, Is Made. Consult Dow Agro Sciences For Further Information.

**MSDS Code:** D03-021-001